Operating Instructions

Operation and Display Unit
for sysTemp® Temperature Controllers and
Hot Runner Control Cabinets

BA Touch II

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Right to technical changes reserved

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1 Installation

1.1 General Information

The BA Touch II with the PSG programmed user interface enables operation and display of PSG temperature controllers of the sysTemp® class. The BA Touch II controls up to 128 zones.

1.2 CANBus

The communication between BA Touch II and the temperature controllers is done by CANBus. A network between BA Touch II and the controllers can be done directly or indirectly via CANVTM module.

A terminating resistor has to be provided on the two outer CANBus participants. On the controller there is a jumper between PIN 3 and 4 on the CANBus connector, on BA Touch II use a 120 resistor between PIN 2 and 7. On CANVTM the terminating resistor is activated by a jumper.

1.2.1 Connecting Cable between Controller and BA Touch II

	Controller	BA Touch II
CAN-L	7	2
CAN-H	9	7

1.3 Addressing of Temperature Controllers

The addressing of the controllers has to be consecutively according to the instructions in the corresponding operating instructions.

Right to technical changes reserved

2 Start-up

At delivery status the PSG ADMIN password is "root", the USER password is "user“ (each without quotation marks).

For start-up perform the following steps:

- Setup and function check of CANBus interface (see chapter 8.2.1 CAN Setup)
- If necessary, setup of the network configuration (see chapter 8.2.2 Network configuration). Only required in case of data recording on external network-compatible hard disk.
- Setup of USER password and ADMIN password (see refer to chapter 8.8 User Administration)
- SCAN CANBus: integrate connected controllers in BA Touch II (see chapter 8.3 Scan)
- After execution of the steps mentioned above the system is ready. In the menu administration (see chapter 8.9 Menu Administration) the visible menus for standard user (USER), as well as user ADMIN can be defined. The menu points can be enabled and their position can be rearranged.

3 Operation / Menus

Note:

The BA Touch II can be configured by the menu administration (see chapter 8.9 Menu Administration). The buttons as well as the single menu settings are explicitly enabled for a user and are therefore visible the operating interface.

On the following pages the buttons and menu settings are described.

The BA Touch II is comfortably operated by a menu bar at the lower display border.

The following buttons belong to the menu bar:

Edit

View Overview Difference View Bar Chart View 30 Zones 15 Zones

8 Zones 6 Zones 4 Zones 1 Zone

Alarm

Utility

On/Off

Current

Standby

Boost

Back

Next

Up

Down

Dependant on the definition of each single button, a menu opens after pressing the button for Edit, View, Alarm and Utility to select a sub menu items.

3.1 Menu Edit

Button Edit

In the menu Edit the value of one parameter for one or several zones is changed.

Function Manual Mode		Lower Set Point Limit	
Function Temperature Limit		Upper Set Point Limit	
Function Start-up Mode		Startup Operation	X
Function Leading Zone		Start-up Time of Start-up Mode	X
Function Automatic Ramp		Start-up Time of 2th Set Point/2th Lowering Value	X
Function Activate/Deactivate Zone		Start-up Time of 3th Set Point/3th Lowering Value	X
Function Current Acceptance		Start-up Time of 4th Set Point/4th Lowering Value	X
Function Acknowledge Stored Alarms		Temperature Offset	X
Function Standby (Input1)		Online Control Function	X
Function Boost (Input 2)		Identification Heating	X
Function Code Number		Application	
Setpoint value		Automatic Function for Sensor Break	
Degree of operation		Heating/Cooling	X
Manual mode		Relay Output Heating	
Lower Temperature Limit GW-		Relay Output Cooling	
Upper Temperature Limit GW+		Short Circuit Supervision of Sensor FAL	
Current Tolerance		Alarm Output Cooling 1	X
Current Setpoint Value		Alarm Output Cooling 2	X
2th Set Point/2th Lowering Value		Control Parameter Cooling Constant	X
3th Set Point/3th Lowering Value		Upper Value of Heater Current	X
4th Set Point/4th Lowering Value		Lower Temperature Value	X
Heating Proportional Band		Upper Temperature Value	X
Heating Derivate Time		Temperature Ramp	X
Heating Integral Time		Automatic Temperature Ramp	
Heating Sampling Time		Correction Factor for XP-H	X
Cooling Proportional Band		Correction Factor for TV/TN	X
Cooling Derivate Time		Amplification Factor for Leading Control	
Cooling Integral Time		Leading Zone	
Cooling Sampling Time		Allocation Zone/3-Phase Current Transformer	X
Heating Degree of Operation Damping		Allocation Zone/Measurement Input	X
Cooling Degree of Operation Damping		Group Number	
Maximum Degree of Operation in Manual Mode		Group Release	
		Group Mode	

In case a MCU/PCU is connected, the message “Configuration does not support desired function“ is shown, because the parameters marked with X are not supported by MCU/PCU.

3.2 Menu View

Button View

The menu View works dependant on the setup (see chapter 8.2 Setup) in 2 ways.

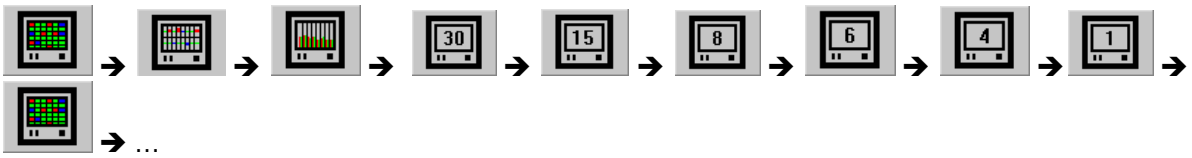
3.2.1 Menu Set-up

In the shown menu one of the following views can be selected and displayed. The less the number of zones the more information can be displayed for each zone.

- Overview (all available zones)
- Difference View
- Bar Chart View
- 30 zones (Setpoint Value / Actual Value / Control Deviation / Degree of Operation / Current)
- 15 zones (Degree of Operation / Current)
- 8 Zones
- 6 Zones(Setpoint increase/decrease, Control Deviation)
- 4 Zones
- 1 zone (Trend - or Textual Presentation)

3.2.2 Button Set-up

The view visible on the button is displayed after activation. The view visible on the button changes to the next possible view, that can be displayed. So the zone views are passed through one after the other.



→ …

3.3 Menu Alarm

Button Alarm

In the menu Alarm the following views can be selected:

- Alarm
- Log Book

3.4 Menu Utility

Button Utility

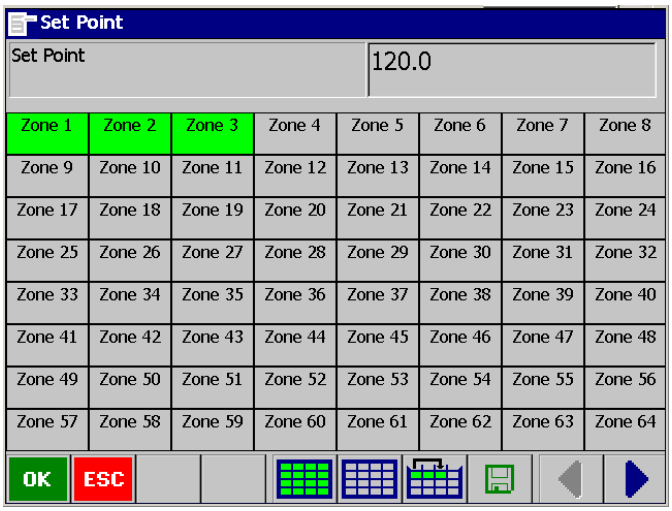
In the menu Utility the following items can be selected:

- Zone Parameters
- System Parameters
- Recipe Administration
- Hot Runner Mold Identification
- Scan
- Setup

4 Data Input (e.g. Set Point)

Button Edit

After selection of Edit - Set Point (set point is enabled as a menu item, see chapter 8.9 Menu Administration) a dialogue box (always the last zones selected e.g. 1-3 are shown here) is displayed in the lower display border:



4.1 Zone Selection

By the buttons in the footer the zones, the change should be valid for, are selected.

Button All Zones; all zones are selected and are therefore represented in green.

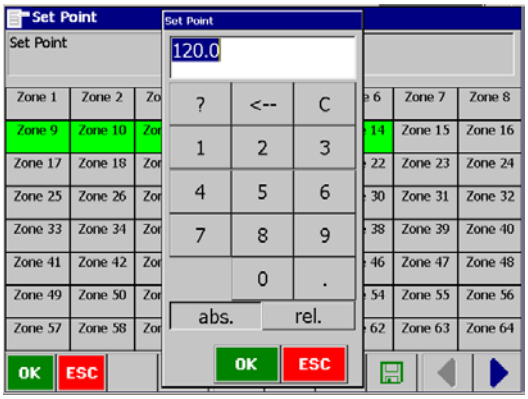
Button No Zones; no zones are selected and are therefore represented in gray.

Button Block Selection; guided by dialog the first and the last zone are selected. The first, the last and the zones in between build a block that is selected and displayed in green.

Each zone can be selected (green)/ deselected (gray) by click on it.

Example

By button Block Selection zone 9 and 14 are selected. The block built of zone 9 up to 14, is displayed in green. For these zones the setpoint value is entered by selection of the setpoint value above the zones and a keypad is displayed, where the new value can be entered.



With the setting abs. the value is directly taken over.

With the setting rel. the present value is changed by the value entered (increased/ decreased).

For parameters of other values (on/off; list of value, etc.) the input mask could look different.

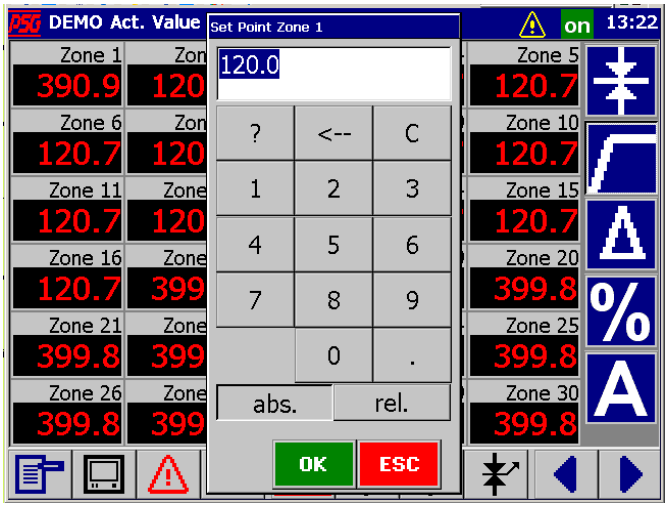
5 Direct Entry for Zone

For the views

- 30 Zones
- 15 Zones
- 8 Zones
- 6 Zones
- 4 Zones
- 1 Zone

the displayed setpoint -, actual value, control deviation, degree of operation and current can be selected directly for data entry.

5.1 Direct Entry for Setpoint Value

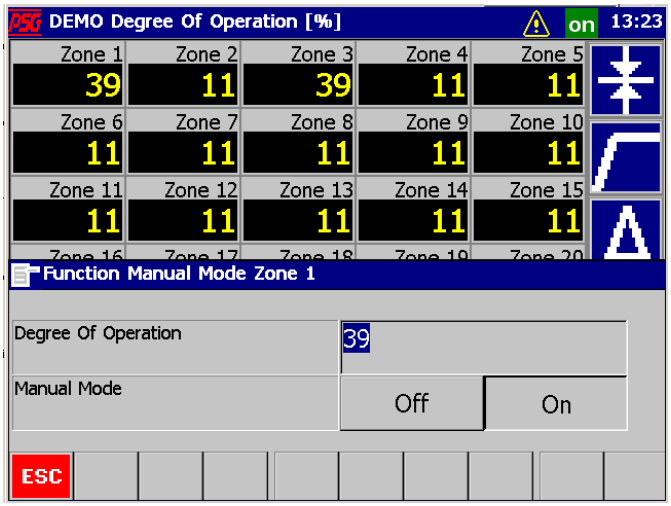


By selection of the value for actual value or setpoint value or difference a window to enter setpoint value is displayed. By the keypad displayed the new value is entered.

With the setting abs. the value is directly taken over.

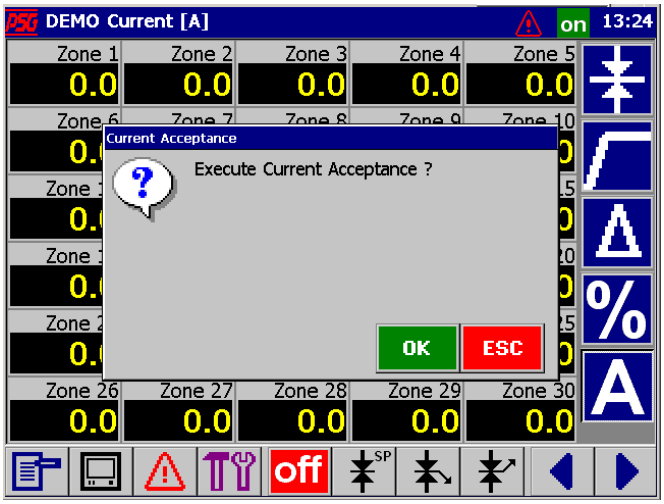
With the setting rel. the present value is changed by the value entered (increased/ decreased).

5.2 Direct Entry for Degree of Operation



By selection of the value for degree of operation the shown window is displayed. By the buttons ON/OFF the manual mode can be activated/deactivated. For manual mode active, the new value for degree of operation can directly be entered.

5.3 Direct Entry for Current



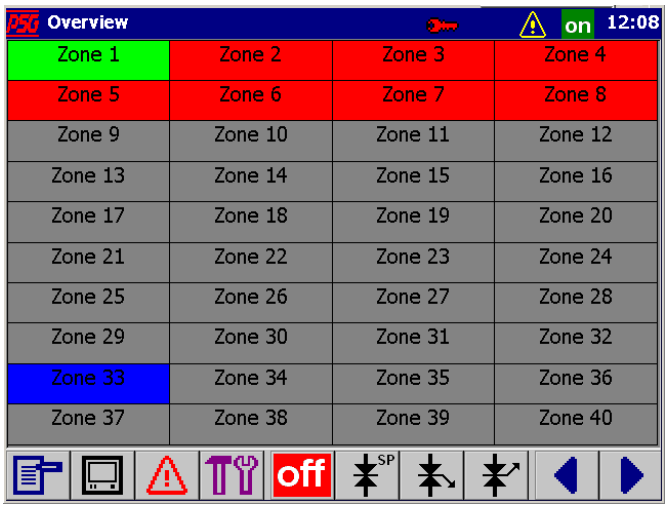
By selection of the value for current the shown window is displayed. A current acceptance can be started.

6 Views

Button View and selection out of displayed list

6.1 Overview

Button Overview or button View and menu selection Overview

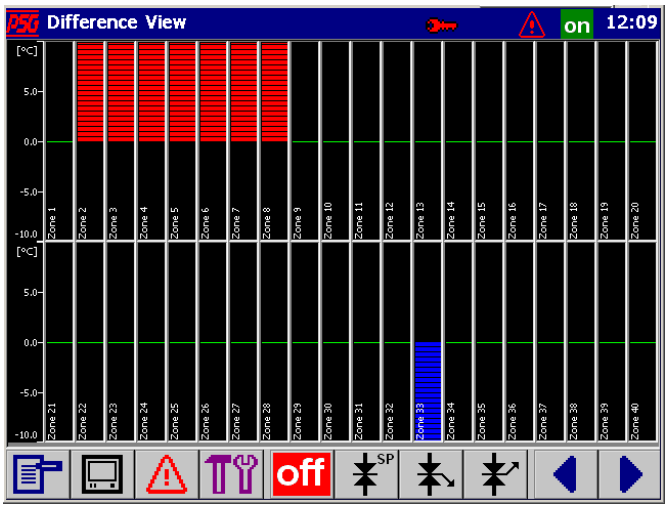


In the overview all available zones are displayed. The status of the single zone is indicated in terms of color and exemplified for zone 1.

Zone 1	Zone 1 passive (gray)
Zone 1	Zone 1 control deviation in between tolerance band +/- 5 K (green)
Zone 1	Zone 1 control deviation out of tolerance band + 5 K (red; actual value above limit value)
Zone 1	Zone 1 control deviation out of tolerance band + 5 K (blue; actual value below limit value)

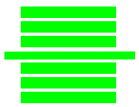
6.2 Difference View

Button Difference View or button View and menu selection Overview

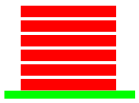


In the difference view, the deviation of the actual value is represented with reference to the setpoint value (green line).

Deviation less than -5 K (blue) from the setpoint value



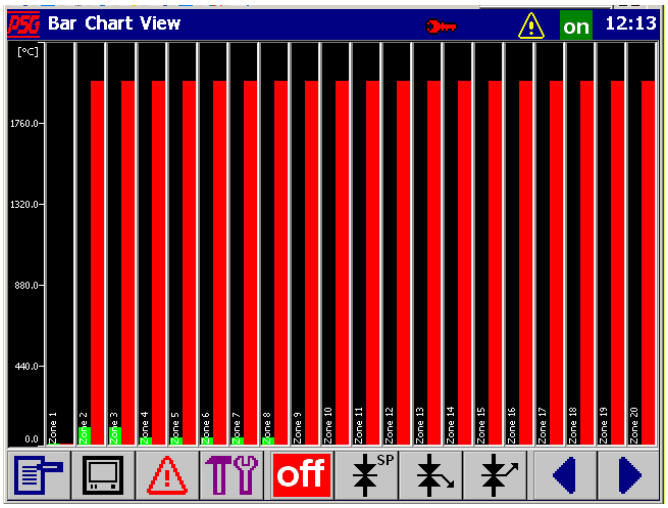
Deviation -5 K to + 5 K (green) from the setpoint value



Deviation greater than + 5 K (red) from the setpoint value

6.3 Bar Chart View

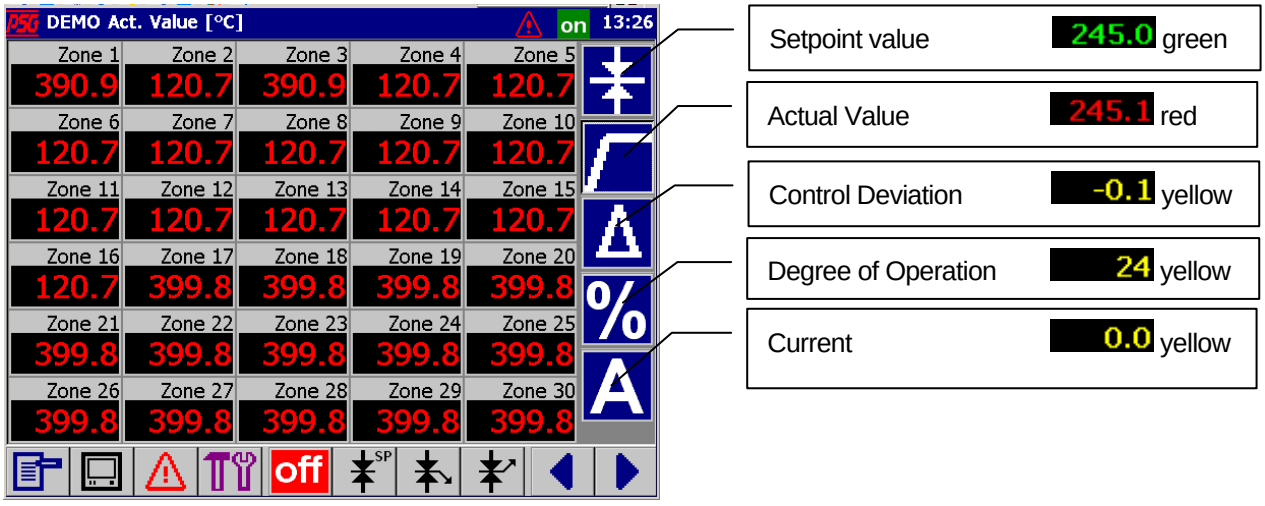
Button Bar Chart View or button View and menu selection Bar Chart View



In the bar chart view, the actual value (red) and the setpoint value (green) are represented absolutely.

6.4 30 Zone View

Button 30 zones or button View and menu selection 30 zones



In the view of 30 zones only one process value is displayed (set point or actual value or control deviation or degree of operation or current).

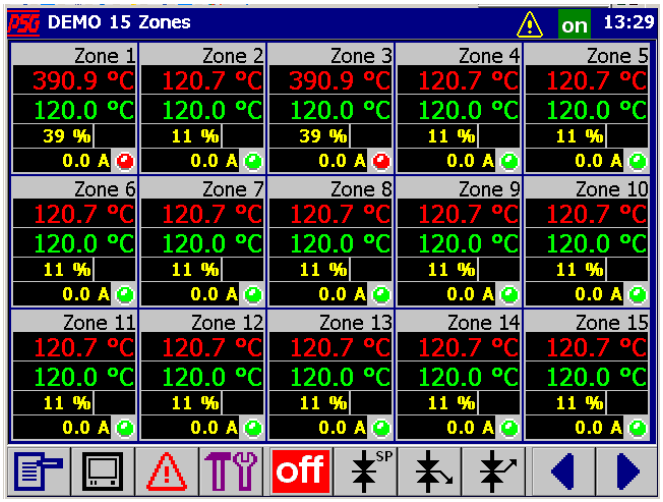
By the sidewise button bar the process value can be selected.

By selection of a value of a zone you can change to Direct Entry for Zone (see chapter 5).

For passive zones the value is displayed in grey color.

6.5 15 Zone View

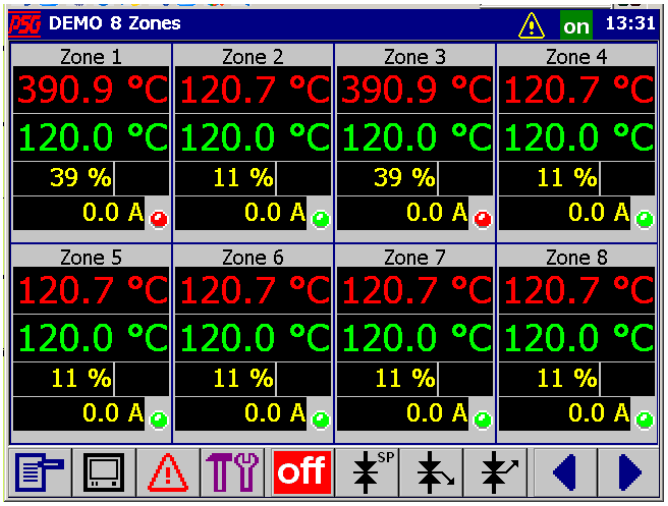
Button 15 zones or button View and menu selection 15 zones



In the view of 15 zones the process values set point, actual value, degree of operation and current are displayed. By a red (error) and green (O.K.) led respectively the alarm condition of the zone is displayed.
By selection of a value of a zone you can change to Direct Entry for Zone (see chapter 5).
For passive zones the value is displayed in grey color.

6.6 8 Zone View

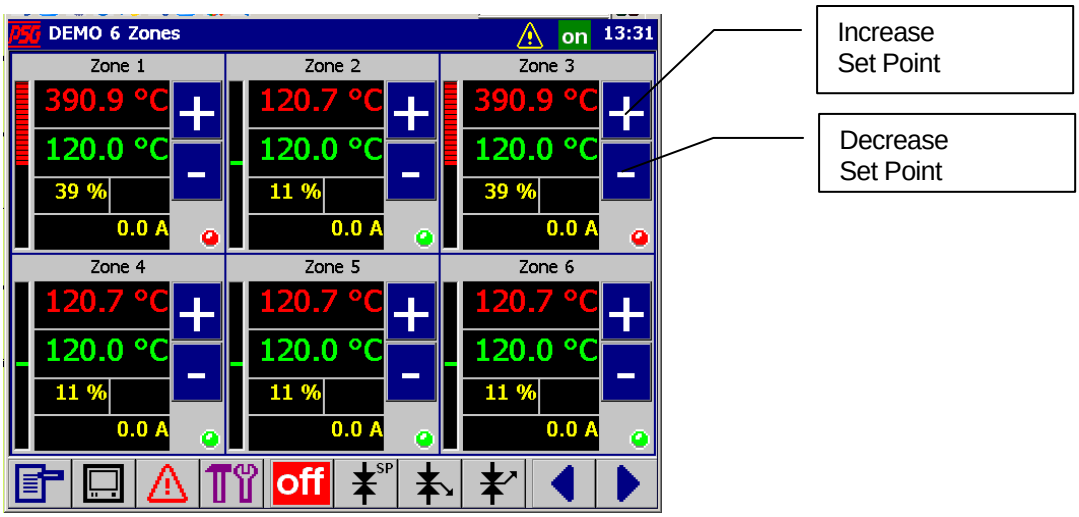
Button 8 zones or button View and menu selection 8 zones



In the view of 8 zones the process values set point, actual value, degree of operation and current are displayed. By a red (error) and/or green (O.K.) led the alarm condition of the zone is displayed, by a text field the status of the zone.
By selection of a value of a zone you can change to Direct Entry for Zone (see chapter 5).
For passive zones the value is displayed in grey color.

6.7 6 Zone View

Button 6 zones or button View and menu selection 6 zones



In the view of 6 zones the process values set point, actual value, degree of operation and current are displayed.

By a red (error) and/or green (O.K.) led the alarm condition of the zone is displayed, by a text field the status of the zone. A bar represents the actual control deviation.

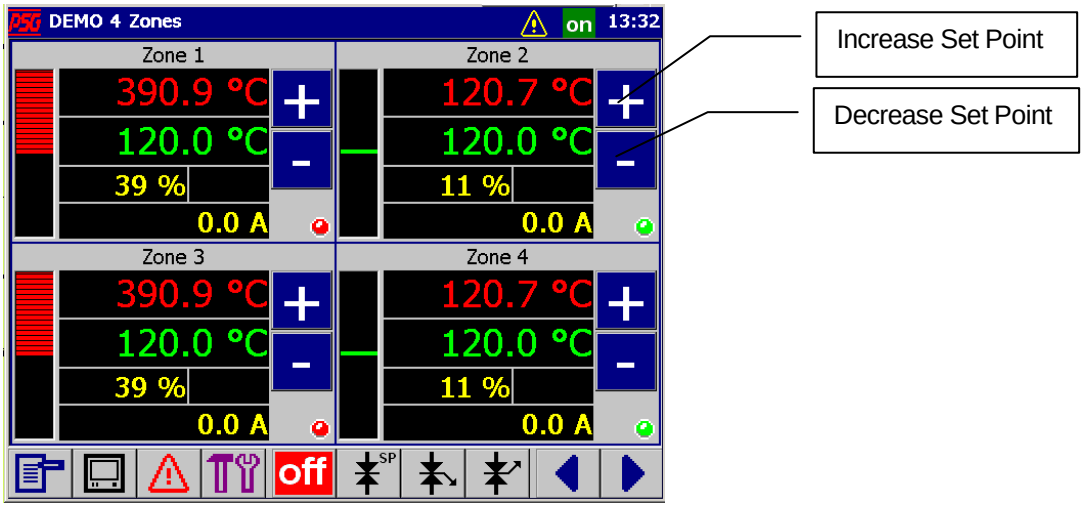
By the buttons “+” and “-“ the set point can directly be changed.

By selection of a value of a zone you can change to Direct Entry for Zone (see chapter 5).

For passive zones the value is displayed in gray color.

6.8 4 Zone View

Button 4 zones or button View and menu selection 4 zones



In the view of 4 zones the process values set point, actual value, degree of operation and current are displayed.

By a red (error) and/or green (O.K.) led the alarm condition of the zone is displayed, by a text field the status of the zone. A bar represents the actual control deviation.

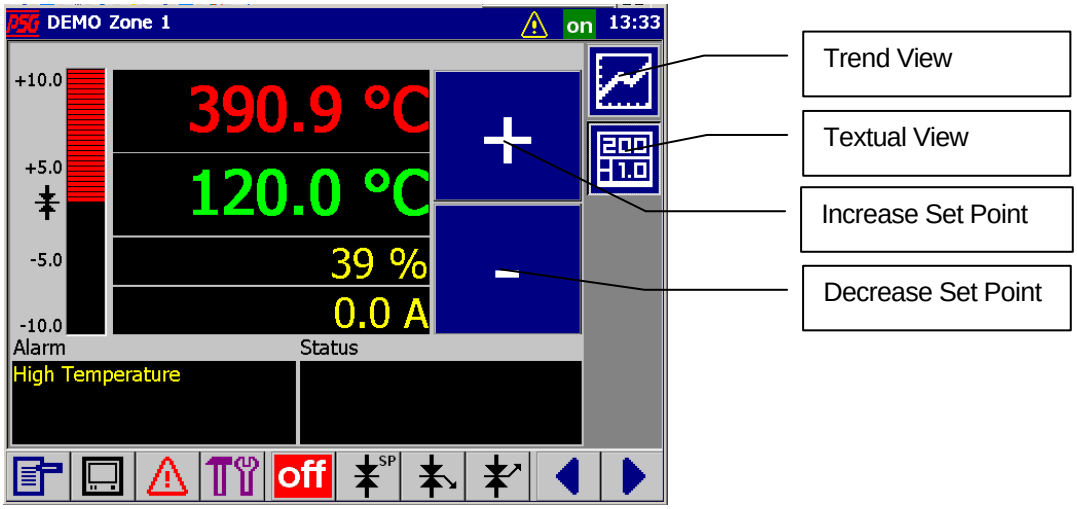
By the buttons “+” and “-“ the set point can directly be changed.

By selection of a value of a zone you can change to Direct Entry for Zone (see chapter 5).
For passive zones the value is displayed in gray color.

6.9 1 Zone View

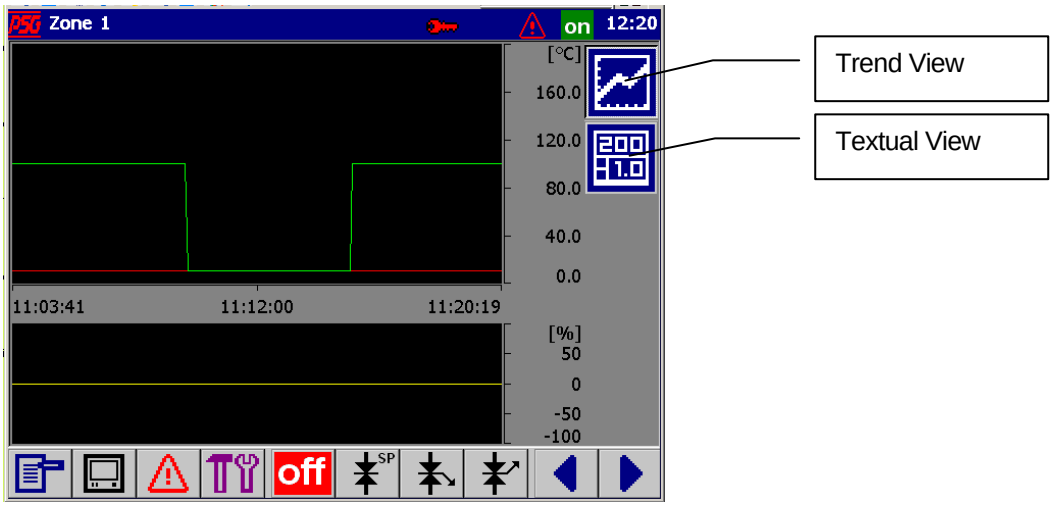
Button 1 zones or button View and menu selection 1 zones

6.9.1 1 Zone Textual View



In the 1 zone textual view the process values actual value, setpoint value, degree of operation and current are displayed.
By two text fields the alarm status and the status in plain text are displayed.
A bar represents the actual control deviation.
By the buttons “+” and “-“ the set point can directly be changed.
By selection of a value of a zone you can change to Direct Entry for Zone (see chapter 5).
For passive zones the value is displayed in gray color.

6.9.2 1 Zone Trend View



In the view of 1 zone – trend view the trend of the process values actual value, setpoint value, degree of operation is displayed.

By the sidewise button bar trend view or textual view can be selected.

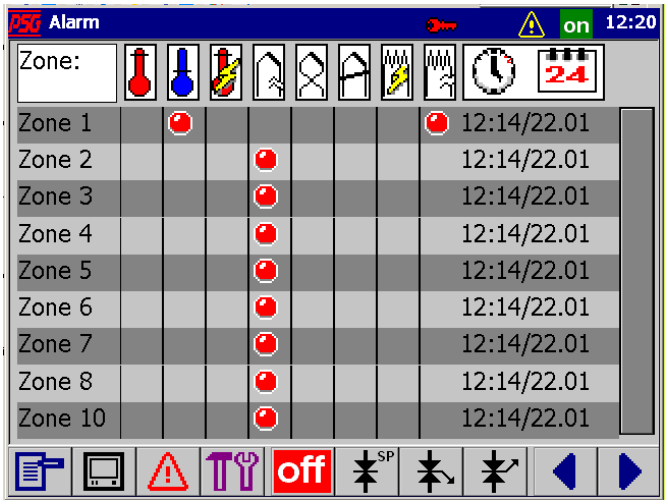
By click on the time - or value scales the scaling can be changed by an input mask. After change of the scaling the trend in the window is erased and built up new.

7 Alarm

Button Alarm

7.1 Actual Alarms

In the view Alarm the actual unacknowledged alarms of the particular zone with time and date are displayed.



Excess temperature GW+

Subnormal temperature GW-

Temperature alarm AL

Sensor break Fb

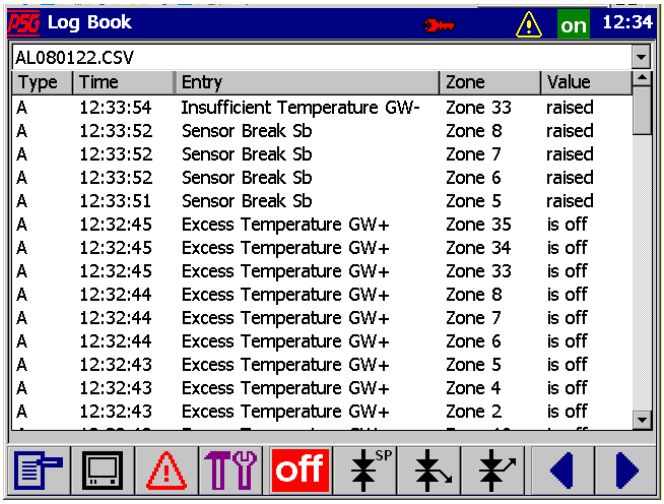
Sensor polarity FP

Short circuit

Thyristor alarm SAA

Current alarm SAE

7.2 Log Book



The backup can be displayed in the log book, when the alarms are stored in the file named in the setup (see chapter 8.2 Setup).

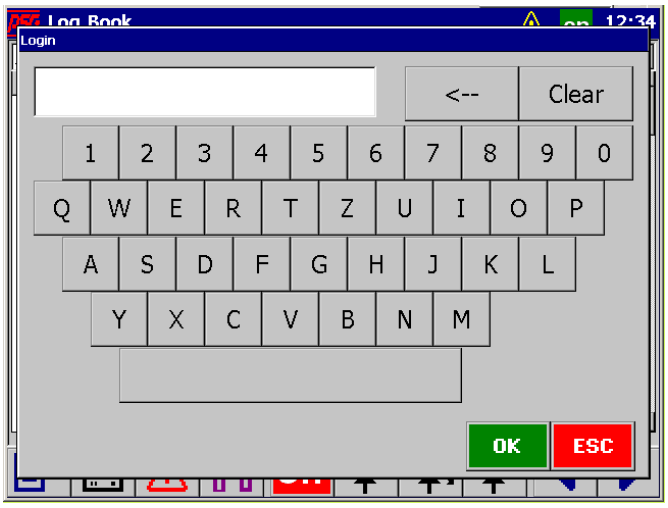
By the pull-down menu on the upper display border a name of an existent log book can be selected. The name of the log book has the following format: AL<year><month><day>.CSV . The file can be opened by EXCEL for example.

8 Utility

Button Utility

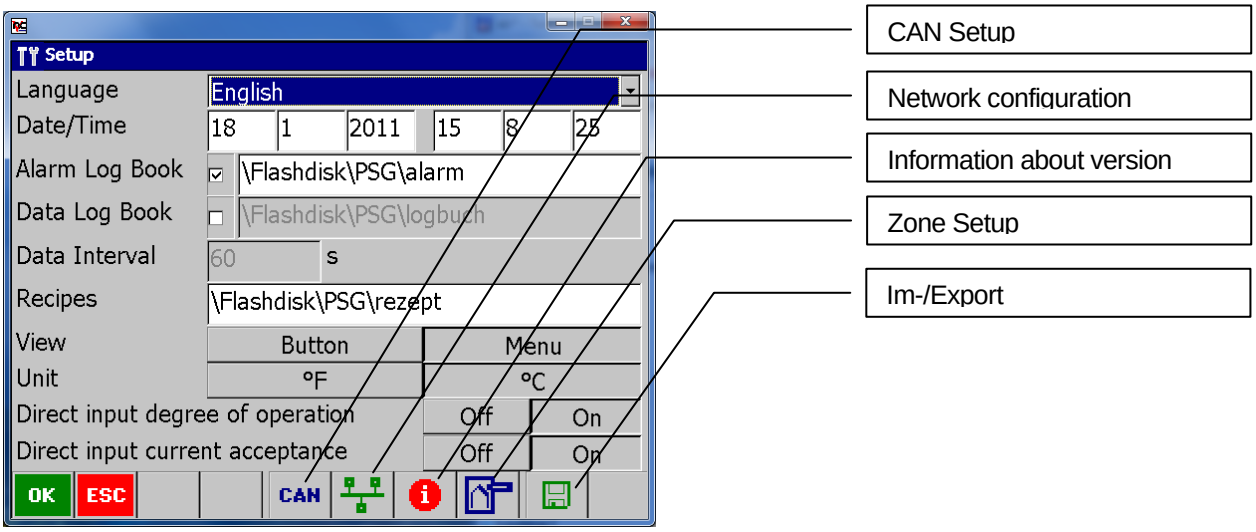
8.1 Login

Enter password for the user USER or ADMIN.



For the passwords at delivery status, see chapter 2 Start-up.

8.2 Setup

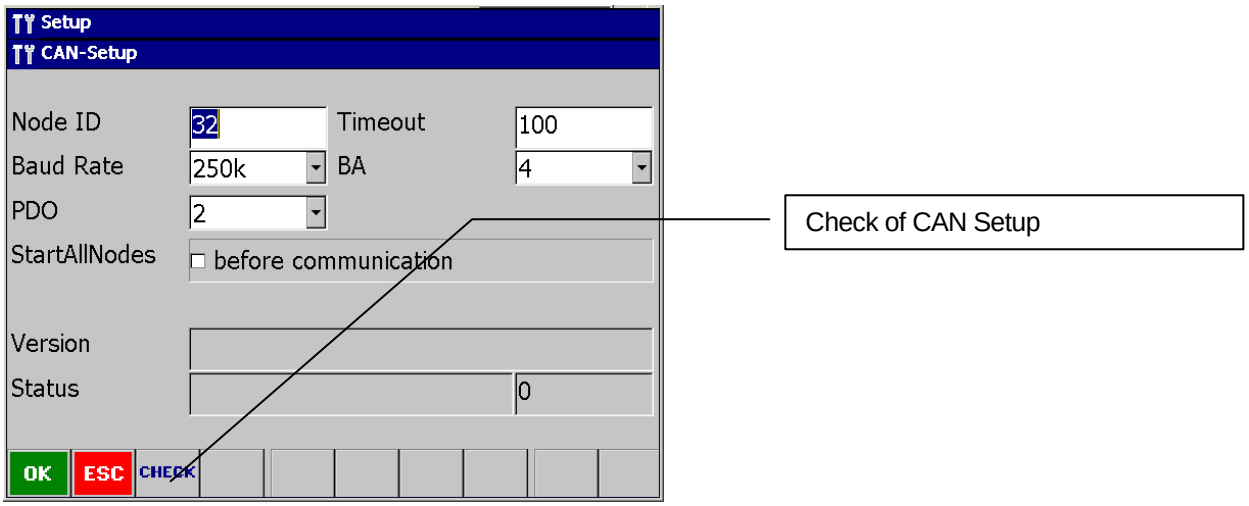


The basic setting is done by the setup of the device.
Language: The languages supported depend on the language files available on the storage card.

Alarm Log Book	Activation/ Deactivation of alarm log book. Selection of the storage directory for alarm log book files.
Data Log Book	Activation/ Deactivation of data log book. Selection of the storage directory for data log book files.
Data Interval	Setting of the interval of data storage.

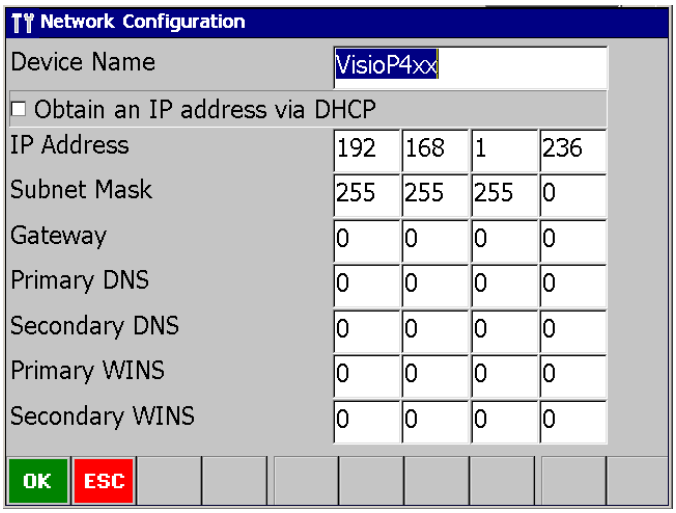
Recipes	Selection of the storage directory for the recipe files.
View	With setting Button you can step through the views by each click on them. With setting Menu a selection list is displayed where the view can be selected from.
Unit	Setting of unit °C / °F. The connected devices are adjusted to this setting.
Direct input degree of operation	Is degree of operation clicked on in the zone view and "Direct input degree of operation" ON, the dialog "Function manual mode zone X" is called.
Direct input current acceptance	Is current clicked on in the zone view and "Direct input current acceptance" ON, the dialog "Current acceptance" is called.

8.2.1 CAN Setup



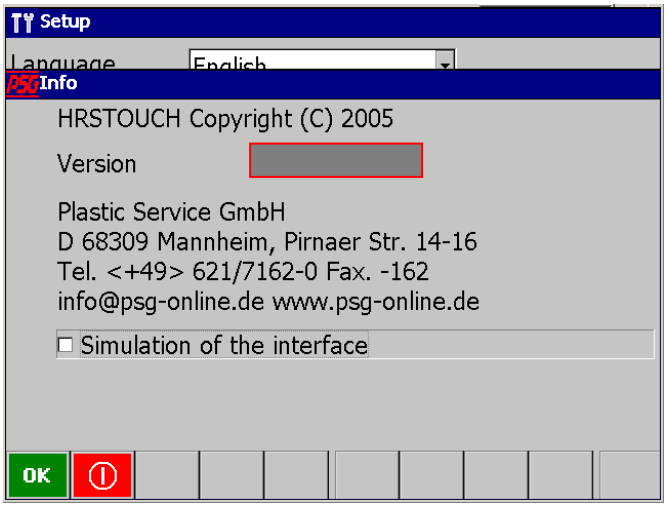
Setup of the CAN interface. An interface test is done by function check.
In case of correct interface setup the version of the software of the actual controller is displayed in the version field. In case of incorrect communication an error message is displayed in the status field.

8.2.2 Network configuration



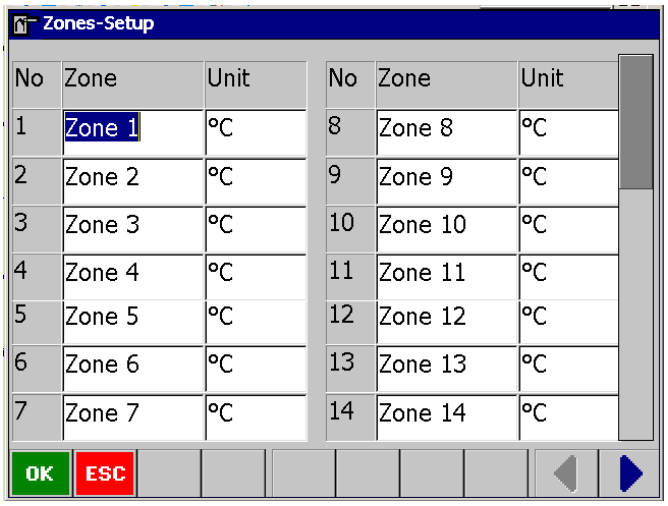
Setting of network addresses.
Only required in case of external data storage by Ethernet.

8.2.3 Information



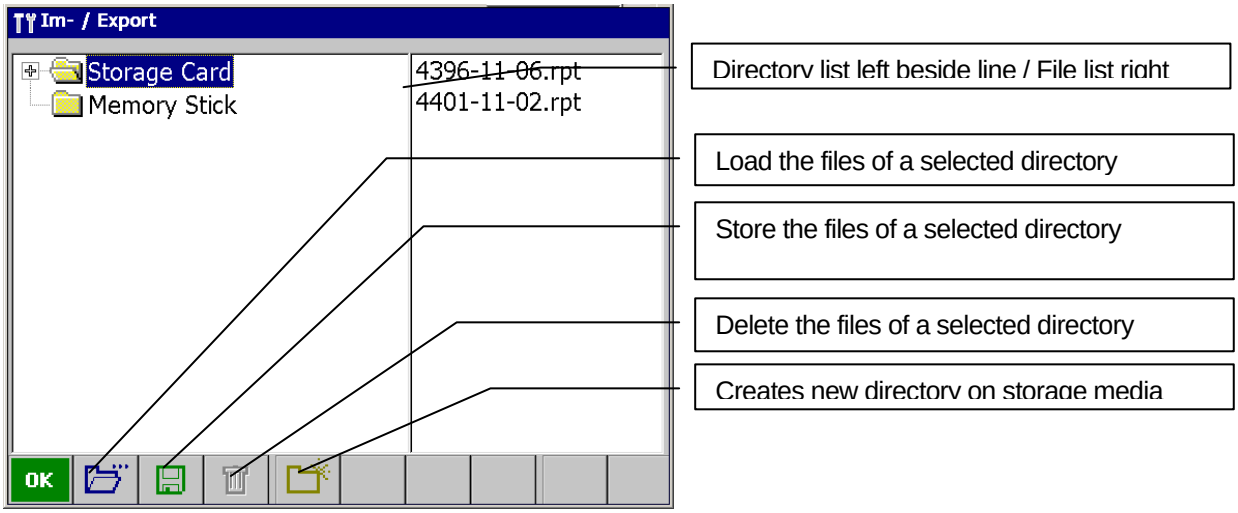
The version VX.Y.Z/YYMMDD of the installed software is displayed. Logged in as user ADMIN the system can be stopped by button .

8.2.4 Zone Setup



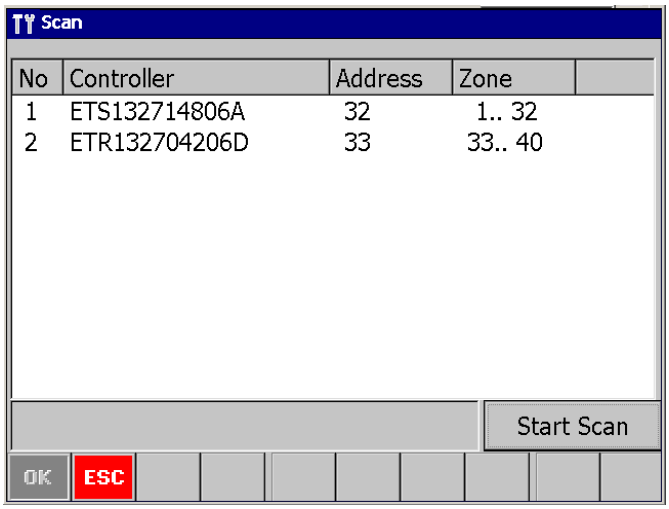
By the column zone a name can be assigned to a zone.
By the column Unit a unit can be assigned to a zone.
Is the unit deleted, °C / °F is automatically entered.
For a user defined unit the actual value of the zone is displayed in orange color in all views, even if the zone is passive or the set point is 0.

8.2.5 Im-/Export



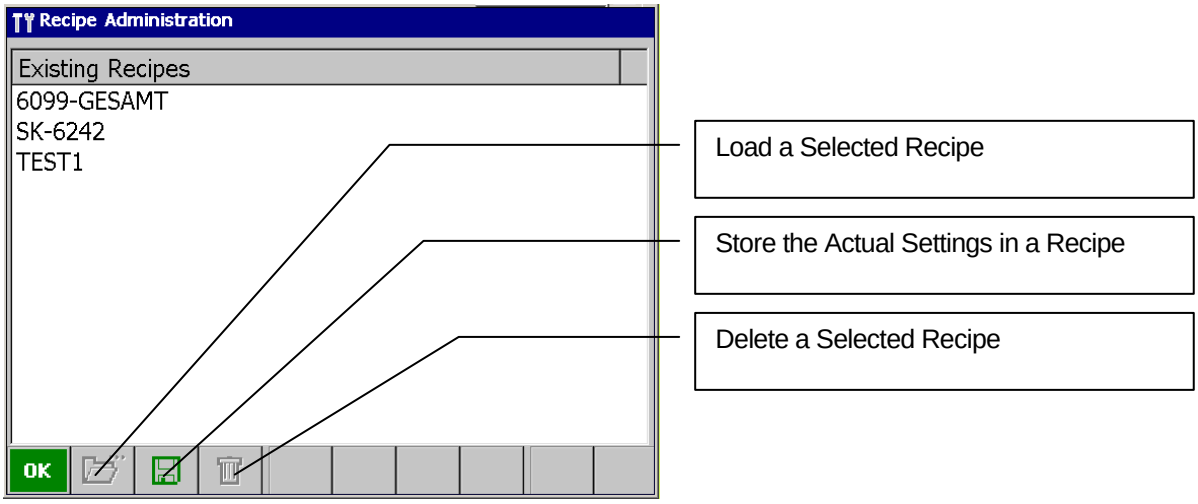
By the USB connectors of the BA Touch II a storage media (here named: Memory Stick) can be connected, directories with files can be exported and/or imported.

8.3 Scan



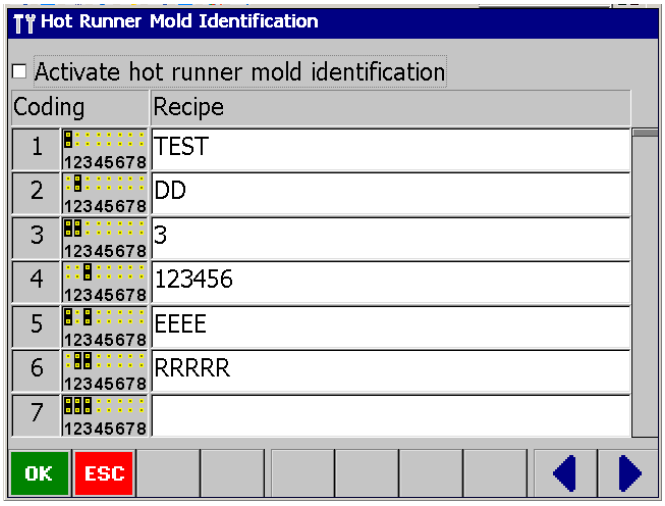
By the button „Start Scan“ the BA Touch II scans the CANBus for controllers. The CANBus is scanned from node id 32 up to node id 127.
The identified controllers are entered in a list, the zones are consecutively numbered.

8.4 Recipe Administration



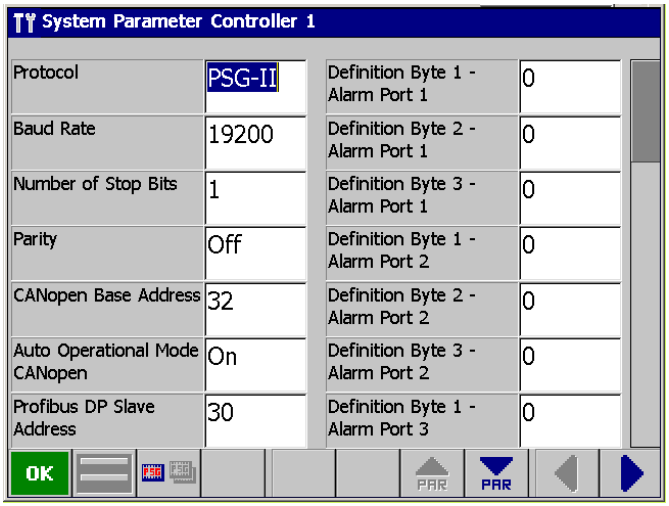
In the recipe administration parameter sets of the controller are stored on the Compact Flash Card and are loaded again into the controller from Compact Flash Card.

8.5 Hot Runner Mold Identification



According to the jumpers set for the plug at the hot runner mold, BA Touch II sends a coding between 1 and 255. For each coding a recipe can be assigned where the settings are taken from after activation of the Hot Runner Mold Identification.
By selection of the text field with the recipe name a dialog opens where the available recipes can be selected.

8.6 System Parameters



System parameters are valid for one controller unit.

By the buttons / is selected, whether the value is written in block mode for all controller units or in single mode for a single controller.

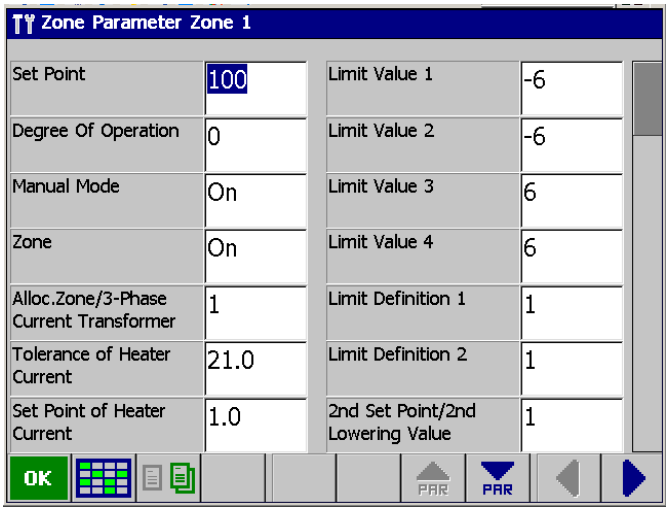
In block mode the controllers can be selected by button to be written in block mode. The green displayed controllers are written, the gray displayed controllers not. The controllers are selected/ deselected by click on them.

By button all controllers are selected, by button all controllers are deselected.

By selection of a parameter field an input mask is opened.

By button / is scrolled to further system parameters.

8.7 Zone Parameter



By the button / is selected, whether the value is written in block mode or in single mode.

In block mode the controllers can be selected by button to be written in block mode. The green displayed zones are written, the gray displayed zones not. The zones are selected/ deselected by click on them.

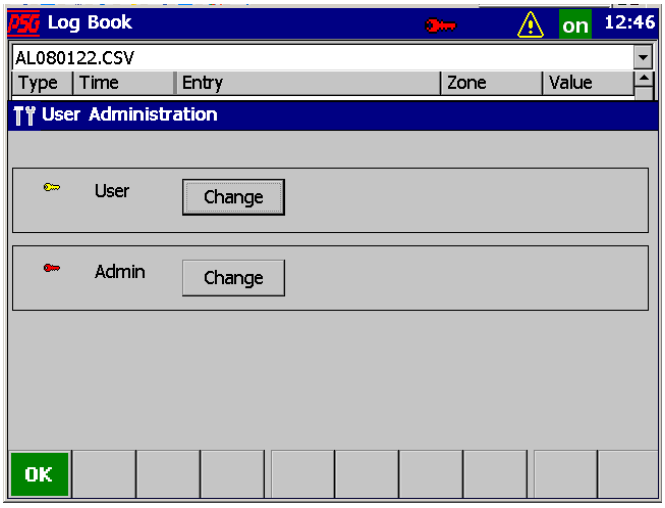
By button all zones are selected, by button all zones are deselected.

By selection of a parameter field an input mask is opened.

By button / is scrolled to further zone parameters.

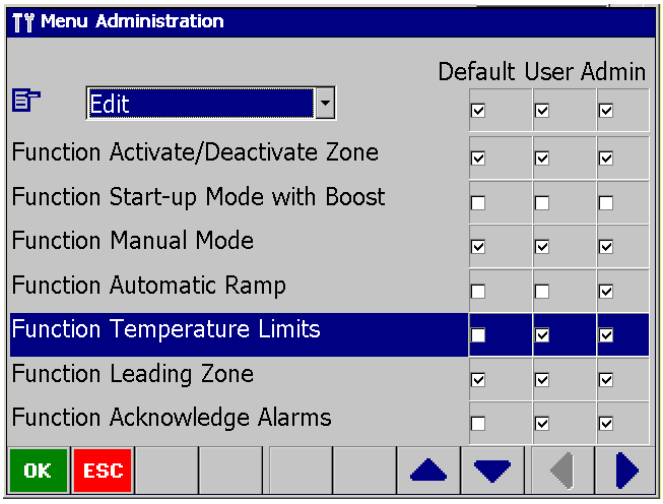
By buttons / is scrolled to further selected zones.

8.8 User Administration



The passwords for user USER and ADMIN can be changed here.
In case of change of the password, the old password, the new password and an affirmation of the new password has to be entered.

8.9 Menu Administration

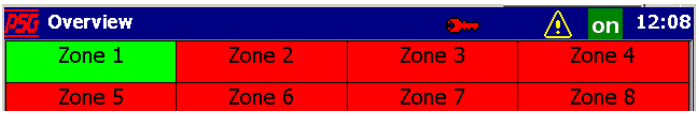


In the menu administration the menu items for each user can be enabled.
By the pull-down menu select the actual menu (Edit / View / Alarm / Utility / On/Off / Setpoint Value / Standby / Boost).
The menu item for the particular user is activated by setting of a check. To change the order of the menu items, select one parameter (selection in blue color) and change the order by pressing the button / up or down.

9 On/Off

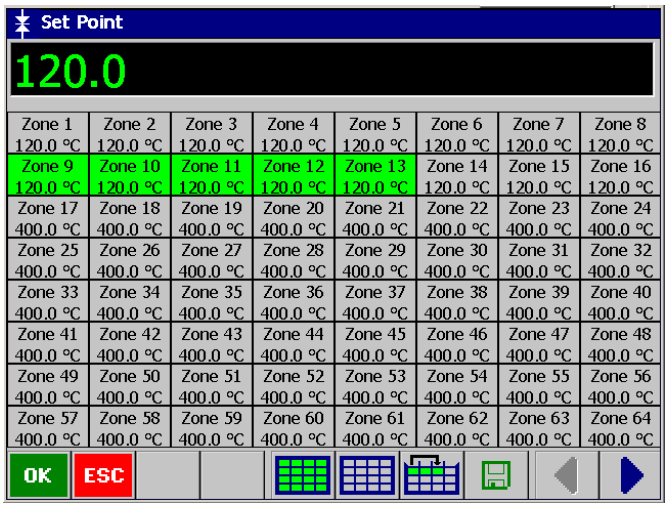
on off button On/Off

By the ON/OFF key, the control outlets of all zones are activated and deactivated. The buttons are alternately visible. In the header the actual status is shown on the left side of the time.



10 Setpoint value

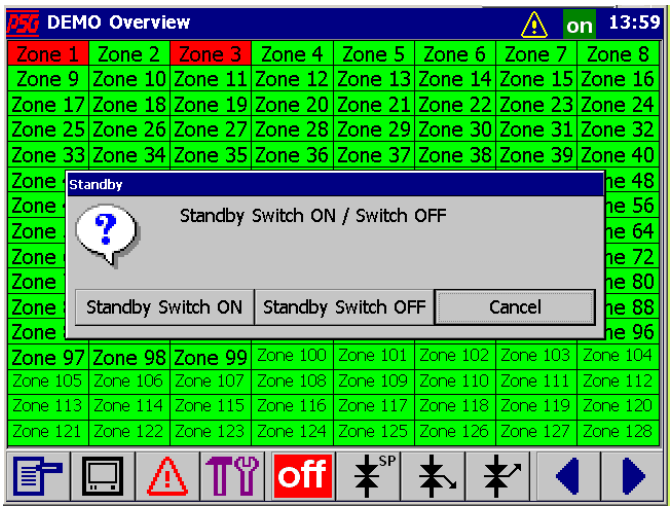
Button Setpoint Value



The button Setpoint value opens a menu where the zones can be selected (see chapter 4.1 Zone Selection). By a click into the value field a keypad opens where a setpoint value can be entered for the before selected zone.

11 Standby

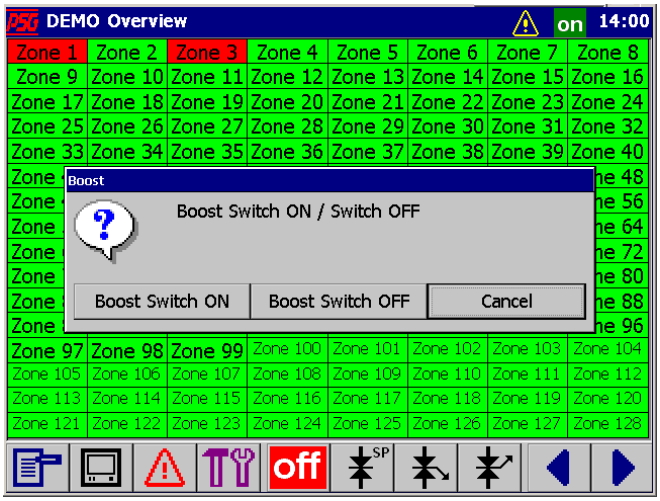
Button Standby



By the button Standby in the footer the Standby function for all zones can be switched on and/or off.
By means of the standby function, the setpoint value is decreased for all zones by the value for the standby function.

12 Boost

Button Boost

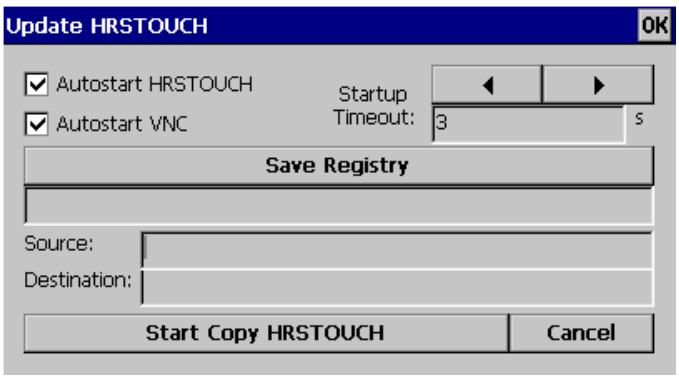


By the button Boost in the footer the Boost function for all zones can be switched on and/or off.
By means of the boost function, the setpoint value is raised for all zones by the value for the boost function.

13 Software Update

The software of BA Touch II is consecutively enhanced. By the USB interface for an USB stick and/or the slot for a Compact Flash Card the software of BA Touch II can be imported and updated. The latest software version can be offered on demand.

Stop the running BA Touch II system first (see 8.2.3 Information).
Copy the software on an USB stick and/or Compact Flash Card. Plug in the USB stick on the rear side of the panel and/or insert the Compact Flash Card in the slot. Start an Explorer on the panel and change to the directory named **Memory Stick** (for USB stick) and/or **Storage Card** (for Compact Flash Card), start program **Update.exe**.
The following dialog box is displayed.



Select the button **Start Copy HRSTOUCH**. Change to the directory named \Memory Stick\HRSTOUCH and/or \Storage Card\HRSTOUCH, where you can find the main program IPC.exe. The installation starts and puts the files into the directory \Flashdisk\PSG (internal flash disk of the panel).

The installation of the software is completed as soon as the button **Start Copy HRSTOUCH** is active again. Exit the menu by CANCEL. Answer the questions “Update HRSTOUCH” with YES and “Save Regsitry to Flash” with YES.

The BA Touch II system can be restarted.

14 Appendix

14.1 Version history

Version	Date	Changes
1.00.02	01/18/2010	Menu items for setup amended For software version HRSTouch V1.1.0
1.00.01	02/16/2009	Menu Edit; not supported parameters by MCU/PCU For software version HRSTouch V1.0.9
1.00.00	01/22/2008	For software version HRSTouch V1.0.6 First edition.